

S/844/62/000/000/064/129
D204/D307

Radiation-chemical transformations...

~11 and (2) ~1.5 and ~3, no significant rise being observed when c was increased above 5×10^{-5} M; this is similar to the transformations occurring in aqueous solutions. The plateaus in $G_{red/c}$ curves indicate an interaction with the free-radical radiolysis products of acetone. The radiation induced reduction of Cr^{VI} is probably only to Cr^V , which immediately disproportionates to the 5- and 6-valent ions.

In O_2 -saturated solutions $Cr^{III} \rightarrow Cr^{VI}$, with the formation of a $Cr^{III}-Cr^{VI}$ complex; this does not occur in water. The oxidation also involves the free radicals formed when acetone is irradiated. Reduction and oxidation yields are tabulated for various acetone solutions of Cr^{VI} , Cr^{III} and Cr^{III}/Cr^{VI} , showing that G_{red} is appreciably reduced in the presence of Cr^{III} . This is explained by the comparatively high reduction-resistance of the $Cr^{III}-Cr^{VI}$ complex formed. Both transformations occur more effectively in acetone than in water, owing to the higher radical yields in irradiated acetone.

Card 2/3

POLAK, L.S., doktor fiziko-matem. nauk, otv. red.; BUGAYENKO, L.T.,
red.; TSIVENKO, V.I., red.; KASHINA, P.S., tekhn. red.

[Proceedings of the Second All-Union conference on Radiation
Chemistry] Trudy Vtorogo Vsesoiuznogo soveshchaniia po radia-
tsionnoi khimii. Moskva, Izd-vo Akad. nauk SSSR, 1962. 756 p.
(MIRA 15:8)

1. Vsesoyuznoye soveshchaniye po radiatsionnoy khimii. 2d,
Moscow, 1960. 2. Institut neftekhimicheskogo sinteza Akademii
nauk SSSR (for Polak).

(Radiochemistry--Congresses)

BUGAYENKO, L.T.; KALYAZIN, Ye.P.; SARAYEVA, V.V.

[Laboratory work in radiation chemistry]Praktikum po radiation-
noi khimii. Moskva, Mosk. gos. univ., 1962. 161 p.

(MIRA 16:1)

(Radiochemistry)

BUGAYENKO, L. T.

"The use of a kinetic method of analysis in radiochemical studies."

submitted at the Conference on Kinetic Methods of Analysis, Ivanovo,
14-16 June 1960

So: Izvestiya Vysshikh Uchebnykh Zavedeniy SSSR, Khimiya i Khimicheskaya
Technologiya, Vol III, No 6, 1960, pages 1113-1116.

S/189/63/000/002/008/010
A057/A126

AUTHOR: Bugayenko, L.T.

TITLE: The application of the kinetic method of analysis to the quantitative determination of substances with concentration changing in time

PERIODICAL: Vestnik Moskovskogo universiteta, Seriya II, Khimiya, no. 2, 1963, 37 - 42

TEXT: • The concentration of a primary product decreases during the reaction and even after ending of the experiment, if in complex chemical systems this primary product reacted with one of the components in solution by a secondary reaction. Such processes might be controlled by: 1) Determining the concentration of the primary product for any moment of the reaction; and 2) calculating the concentration of the primary product considering its decomposition by the secondary reaction. The author presents three variants for the determination of the primary product by kinetic methods at the end of the experiment, assuming the secondary reaction to be of second order and the concentration of the

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The application of the kinetic method of

S/189/63/000/002/003/010
A057/A126

product to be lower than that of the initial substance. I. The concentration of the primary product can be easily calculated by the equation of a first order reaction, if the primary product reacts with the initial substance. II. If the primary product reacts only with another component of the solution, the concentration of the former can be determined directly, or from the change of concentration of the second component with the time. The concentration of the primary product can be calculated from the difference in concentration of the second component at the time t_0 and t_{∞} . The constant k_2 of the reaction rate might be calculated from:

$$k_2 = \frac{1}{t_1(a-b_1)} \ln \frac{b_1(a-x)}{a(b_1-x)} \quad (2)$$

where k_2 = constant of the reaction rate of second order, a and b_1 = concentration of the second component and the product at the first measurement, x = change of the concentration of the second component in time t calculated from the first measurement. The product can be identified by comparison with literature data for k_2 . The value b_1 has to be corrected by the formula:

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$$b_1 = x + \frac{a - x}{\frac{a}{b_1} e^{k_1 t} - (a - b_1) k_1 t} \quad (3)$$

where b_1 stands for the approximate value of b_1 . The total concentration of the product at the end of the experiment can be calculated (at a reliable extrapolation) by the equation:

$$b = b_1 + \Delta b = b_1 + \frac{b_1 - \frac{a e^{k_1 t} (a - b_1)}{(a - x)/(b_1 - x)}}{e^{k_1 t} (a - b_1) - 1} \quad (4)$$

where Δb = change of the concentration of the product in the time between the first measurement and the end of the experiment. III. In case the primary product reacts with the initial substance and the second component of the solution, the concentration of the primary product has to be determined directly, and the concentration at the end of the experiment found by extrapolation. De-

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terminations of the concentration of the primary product at any moment of the experiment might be carried out only at a constant rate of formation of the primary product. The rate of formation can be calculated by

$$db/dt = X - k_1 b, \quad (5)$$

and

$$db/dt = X - k_2 ab, \quad (6)$$

respectively, where X = rate of formation, and the solution of which is:

$$X = \frac{k_1 b}{1 - e^{-k_1 t}} \quad (7)$$

and

$$X = \frac{k_2 ab}{1 - e^{-k_2 at}} \quad (8)$$

The author gives as an example for the application of the described kinetic method the investigation of the effect of X-ray irradiation (70 kv) of 2.5 M aqueous solutions of chloric acid containing Fe (II) perchlorate. The concentration of the chlorate ion was determined spectrophotometrically from the

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The application of the kinetic method of

S/189/63/000/002/008/010
A057/A126

change of concentration of the iron ions and at the end of the irradiation by equations (3) and (4). Considering the reaction between the chlorate ions and iron during irradiation, the concentration of the former was calculated by equation (8). It can be seen that, if this reaction is not considered, considerably lowered yield of chlorate ions would be obtained. There are 1 figure and 4 tables.

ASSOCIATION: Laboratoriya radiatsionnoy khimii (Laboratory for Radiation Chemistry)

SUBMITTED: August 2, 1961

Card 5/5

RODER, M.; BAKH, N.A.; BUGAYENKO, L.T.

Redox transformations of acceptors in organic solvents induced
by ionized radiations. Part 1: Transformations of iron chlorides
in acetone solutions. Kin.i kat. 4 no.2:193-197 Mr-Ap '63.
(MIRA 16:5)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova,
khimicheskiy fakul'tet.
(Iron chlorides) (X rays)

RODER, M.; BAKH, N.A.; BUGAYENKO, L.T.

Oxidation-reduction conversions of acceptors in organic solvents induced by ionized radiations. Part 2: Conversions of copper compounds in acetone solutions. Kin. i kat. 4 no.3: 353-356 My-Je '63. (MIRA 16:7)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova, khimicheskiy fakul'tet.

(Oxidation-reduction reaction)
(Copper chlorides) (X rays)

BUGAYENKO, L.T.; ROMANTSEV, M.F.

Kinetics of the reaction of potassium permanganate with aldehydes
in an acetone solution. Zhur.ob.khim. 33 no.6:1707-1710 Je
'63. (MIRA 16:7)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
(Potassium permanganate) (Aldehydes)

L 16974-63

EPF(c)/EWT(m)/BDS

AFFTC/ASD Pr-4 AR
S/020/63/149/006/019/027

AUTHOR: Bakh, N. A., Roder, M., and Bugayenko, L. T. 62

TITLE: Mechanism of radiation-induced oxidation and reduction of inorganic acceptors in acetone solutions

PERIODICAL: Akademiya nauk SSSR. Doklady. v. 149, no. 6, 1963, 1356-1359

TEXT: The authors investigated the effect of X rays on solutions of ions of variable valence Fe^{III}, Fe^{II}, Cu^{II}, Cu^I, Cr^{VI}, Cr^{III}, Mn^{VII}, I⁻, and I₃⁻ in order to clarify the behavior of acetone with respect to oxidizing and reducing acceptors, on using the corresponding chlorides as cations and CrO₃, K₂MnO₄, and KI as anions. It was established that variable-valence ions form with polar solvents solvates with partial electron transfer that is completed upon an excitation. In the cases examined acetone is an electron donor and the energy transmitted by the excited molecules of the solvent to the solvates makes the reduction possible. Thus the high yield of the process is associated with the transfer of excitation energy from acetone to the acceptor. This mechanism is similar to that suggested by Kryukov and Dayn (Doklady Akademiya nauk SSSR, 138, 153 (1961). There are 4 figures and 1 table.

ASSOCIATION: Institut elektrokimii Akademii nauk SSSR. Moskovski gosudarstvennyy institut im. M. V. Lomonosova (Institute of Electrochemistry, Academy of Sciences USSR. Moscow State University imeni M. V. Lomonosov)

SUBMITTED: January 2, 1963
Card 1/1

PHASE I BOOK EXPLOITATION

SOV/6526

Bugayenko, Lenar Timofeyevich and Yevgeniy Petrovich Kalyazin

Khimiya radiatsionnaya; khimicheskoye deystviye yadernykh izlucheni
(Radiation Chemistry; Chemical Action of Atomic Radiation)
[Moscow] Izd-vo AN SSSR [1963] 132 p. (Series: Akademiya nauk
SSSR. Nauchno-populyarnaya seriya) 20,000 copies printed.

Resp. Ed.: L. S. Polak, Doctor of Physical and Mathematical Sci-
ences; Ed. of Publishing House: V. G. Ioffe; Tech. Ed.: L. A.
Sushkova.

PURPOSE: This book is intended for the general reader who is
interested in the present state of radiation chemistry.

COVERAGE: The book deals with nuclear reactions and with radiation-
induced transformations in chemistry and biology.

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Radiation Chemistry (Cont.)

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Radiation Chemistry (Cont.)

Ch. 9. The Future of Radiation Chemistry

Conclusion

AVAILABLE: Library of Congress

SUBJECT: Nuclear Engineering

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GM/rbm/ec
3-17-64

BUGAYENKO, L.T.; ROMANTSEV, M.F.; BAKH, N.A.

Oxidation-reduction conversions of acceptors in organic solvents under the effect of ionizing radiations. Part 3: Reduction of permanganate ions in acetone solutions. Kin. i kat. 4 no.6:811-814 N-D '63. (MIRA 17:1)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova, khimicheskii fakul'tet.

BUGAYENKO, L.T.; KHUAN GUAN'-LIN' [Huang Kuan-lin]

Spectrophotometry of the sulfate complexes of cerium (IV).
Zhur. neorg. khim. 8 no.11:2479-2482 N '63. (MIRA 17:1)

RODER, M.; GO KUN' [Kuo K'un]; BAKH, N.A.; BUGAYENKO, L.T.

Ionized radiation-induced redox conversions of acceptors in organic solvents. Part 5: Transformations of KI and I₂ in acetone solutions. *Kin.i kat.* 5 no.6:976-980 N-D '64.

(MIRA 18:3)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

BUGAYENKO, L.T.; KHUAN GUAN'-LIN' [Huang Kuan-lin]

1 1/2 regularity in the radiolysis of sulfuric acid. Kin. i kat.
5 no.3:550-551 My-Je '64. (MIRA 17:11)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova, khimicheskiy fakul'tet.

L 54738-65 EWG(j)/EWI(m)/EPF(c)/EPF(n)-2/ENP(j)/I/EWA(h)/EWA(l) Pc-4/Pr-4/
Feb/Pu-4 GG/RM

ACCESSION NR: AP5017885

UR/0195/64/005/005/0776/0780

AUTHOR: Noder, M.; Bakh, N. A.; Bugayenko, L. T.

TITLE: Oxidation-reduction transformations of acceptors in organic solutions under the action of ionizing radiations.¹⁹ IV. Transformations of compounds of Tri- and hexavalent chromium in acetone solutions

SOURCE: Kinetika i kataliz, v. 5, no. 5, 1964, 776-780

TOPIC TAGS: x ray effect, chromium compound, acetone, redox reaction, radiation chemistry

ABSTRACT: The effects of X-rays on dilute solutions of CrO_3 and CrCl_3 in acetone ($5 \cdot 10^{-5}$ - $5 \cdot 10^{-3}$ M and $2 \cdot 10^{-4}$ - $2 \cdot 10^{-2}$ M, respectively) were investigated. The reduction of Cr^{VI} to Cr^{III} was found to proceed both in the absence and in the presence of oxygen, with limiting yields of 10.6 and 3.5 equivalents per 100 eV, respectively. Cr^{III} is oxidized under the action of radiation only in the presence of oxygen, with a yield of 2.0 equivalents per 100 eV in 0.01 M CrCl_3 solution. It was found that Cr^{VI} ,

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L 54738-65

ACCESSION NR: AP5017885

bound in a complex with Cr^{III} , is more stable to the action of the radiolysis products of acetone (both in oxygen and in nitrogen) than noncomplexed Cr^{VI} .
Orig. art. has: 5 graphs.

ASSOCIATION: Khimicheskiy Fakul'tet, Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Faculty of Chemistry, Moscow State University)

SUBMITTED: 03Oct62

ENCL: 00

SUB CODE: IC, GC

NR REF SOV: 005

OTHER: 002

JPRS

Fac.
Card 2/2

BUGAYENKO, L.T. (Moscow)

Radiation chemistry of oxychlorine compounds. Part 2: Conversions in aqueous sodium chlorite solutions of medium and high concentrations. Zhur. fiz. khim. 38 no.12:2899-2900 D '64.

(MIRA 18:2)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.

EUGAYENKO, L.T.; BYAKOV, V.M.

New method of estimating the relations of the rate constants
in reactions between radicals and their acceptors. Dokl. AN
SSSR 158 no.1:186-188 S-0 '64 (MIRA 17:8)

1. Moskovskiy gosudarstvennyy universitet, Institut teoreti-
cheskoy i eksperimental'noy fiziki.

PIKAYEV, Aleksey Konstantinovich; SPITSYN, V.I., akademik, otv.
red.; BUGAYENKO, L.T., red.

[Pulse radiolysis of water and aqueous solutions] Impul's-
nyi radioliz vody i vodnykh rastvorov. Moskva, Nauka,
1965. 259 p. (MIRA 18:1)

RODER, M.; BAKH, N.A.; BUGAYENKO, L.T.

Oxido-reduction transformations of acceptors in organic solvents under the effect of ionized radiations. Part 4: Transformations of tri- and hexavalent chromium compounds in acetone solutions. Kin. i kat. 5 no.5:776-780 S-O '64. (MIRA 17:12)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova, khimicheskiy fakul'tet.

KHUN KUAN-LIN [Kuan Kuan-lin]; BUGAYENKO, L.T.

hydrolysis of iron ions in sulfuric acid solutions. Zhur. neorg.
khim. 10 no.4:745-750 Ap '65. (MIRA 1-66)

L. Moskovskiy gosudarstvennyy universitet imeni Lomonosova,
khimicheskoy fakul'tet.

BUGAYENKO, L.T.; BELEVSKIY, V.N.

Reaction of thermalized electron in frozen aqueous solutions.
Dokl. AN SSSR 164 no.1:127-130 S '65. (MIRA 18:9)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
Submitted February 26, 1965.

L 10520-66		EWT(l)/EWT(m)/T/EWP(t)/EWP(b)		LJP(c) RPL JL/WW/JW/JWT/QG/WE	
ACC NR:	AP5027186	SOURCE CODE: UR/0076/65/039/010/2589/2591			
AUTHOR:	Belevskiy, V. N.; Bugayenko, L. T. 72 B				
ORG:	Moscow State University im. M. V. Lomonosova (Moskovskiy gosudarstvennyy uni-versitet)				
TITLE:	Formation and stabilization of <u>hydrogen</u> atoms in frozen acidic aqueous solutions				
SOURCE:	Zhurnal fizicheskoy khimii, v. 39, no. 10, 1965, 2589-2591				
TOPIC TAGS:	<u>hydrogen</u> , irradiation effect, gamma irradiation, hydrogen ion, electron paramagnetic resonance, aqueous solution, hydrogen atom reaction, electron spin resonance				
ABSTRACT:	Experimental data obtained by <u>electron spin resonance</u> are reported on the formation of hydrogen atoms in solutions of <u>NaClO₄</u> , <u>HClO₄</u> and a series of other acids irradiated with ⁶⁰ Co gamma rays at 77K. The yield of H atoms was found to depend primarily on the concentration of hydrogen ions, not ClO ₄ ⁻ ions. Apparently, in acid solutions H atoms are formed chiefly by the reaction $e^- + H_3O^+ \rightarrow H + H_2O.$ Thus, the main condition of the formation and subsequent stabilization of H atoms in aqueous solutions is the presence of a sufficiently high hydrogen ion concentration. The second condition of the stabilization of H atoms is the stability of the anion of the acid toward the H atom. Another condition of stabilization of H atoms is the presence of a complex anion whose geometrical configuration permits their trapping.				
Card	1/2				
		UDC: 541.15			

L 10520-66

ACC NR: AP5027186

Orig. art. has: 2 figures and 1 table.

SUB CODE: 0710 SUBM DATE: 09Jul64 / ORIG REF: 001 / OTH REF: 006

Card 2/2

L 35849-66 EWP(j)/EAT(m)/T RM/WW/JWD

ACC NR: AP6014894

SOURCE CODE: UR/0076/65/039/012/2958/2961

AUTHOR: Belevskiy, V. N.; Bugayenko, L. T.

49

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

6

TITLE: Stabilization of a solvated electron in frozen neutral aqueous solutions

SOURCE: Zhurnal fizicheskoy khimii, v. 39, no. 12, 1965, 2958-2961

TOPIC TAGS: electron, aqueous solution, absorption spectrum, perchlorate, sodium compound, x ray irradiation, gamma irradiation

ABSTRACT: The article reports the results of an investigation of the absorption spectra in the visible and ultraviolet regions, in frozen concentrated aqueous solutions of sodium perchlorate and other salts, irradiated with x rays and gamma rays. The solutions to be irradiated were frozen with liquid nitrogen in flat quartz cells with a thickness of 3 mm. The resulting glasses were transparent in the region from 250 to 1200 m μ . During measurement of the spectra with a type SF-4 spectrophotometer the cells were placed in a quartz Dewar vessel filled with liquid nitrogen. All irradiations and measurements were done at 77°K. In individual cases, the electron paramagnetic resonance spectrum

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* UDC: 541.515

L 35849-66

ACC NR: AP6014894

was taken with a type EPR-2 radiospectrometer. Experimental results are shown graphically. Observations were made of solvated electrons, stabilized under these conditions. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 06Aug64/ ORIG REF: 003/ OTH REF: 009

ms
Card 2/2

L 04475-57 EWT(m)/T/FWP(t)/ETI LIP(c) JD/WN/JG JWD

ACC NR: AP6020376

(A)

SOURCE CODE: UR/0078/66/011/003/0673/0675

AUTHOR: Wang, Wen-hsing; Bugayenko, L. T.; Belevskiy, V. N.

ORG: Chemistry Department, Moscow State University (Khimicheskoy fa'kul'tet, Moskovskiy gosudarstvennyy universitet)

TITLE: Thermographic analysis of sodium perchlorate solutions

SOURCE: Zhurnal neorganicheskoy khimii, v. 11, no. 3, 1966, 673-675

TOPIC TAGS: phase diagram, perchlorate, sodium compound, thermographic analysis

ABSTRACT: The thermographic method was used to study the phase transformations in concentrated aqueous solutions of sodium perchlorate at low temperatures. The thermograms were recorded in temperature vs. time coordinates. Both polycrystalline samples (obtained by slow freezing) and vitreous samples were studied. In polycrystalline samples, the heating curves in the range of -196 to 0°C (77-273°K) showed only one endothermic transition at -38°C (235°K) (curve 1, Fig. 1). In vitreous samples, the heating curves showed two main transitions: an exothermic one (with a sharp temperature rise) at -78°C (195°K) and an endothermic one (with a distinct plateau) at 38°C (235°K) (curve 2, Fig. 1). The first transition corresponds to the devitrification of the solution, and the second is thought to be associated with the fusion of a eutectic mixture of the hypothetical composition $\text{NaClO}_4 \cdot 4\text{H}_2\text{O}$. A phase diagram of the aqueous sodium perchlorate solutions is shown in Fig. 2. Orig. art. has: 2 figures.

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UDC: 546.33'137

1. 04477-07

ACC NR: AP6020376

Fig. 1. Heating curves of frozen 8 M NaClO_4 solutions
1, 2 - integral thermograms of polycrystalline
and vitreous samples; 3 - differential thermo-
gram of vitreous sample

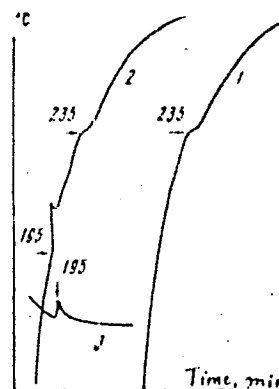
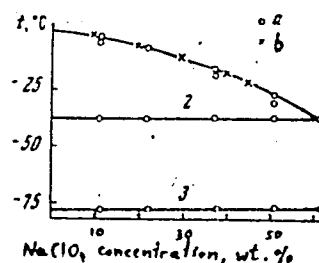


Fig. 2. Phase diagram of aqueous sodium perchlorate
solutions.
a - our data; b - data of P. Freeth (Rec.
Trav. chim. 43, 477, 1924). 1 - temperature
of start of crystallization; 2 - temperature
of start of fusion; 3 - temperature of tran-
sition from vitreous to polycrystalline state



SUB CODE: 07/ SUM DATE: 30Jun64/ ORIG REF: 001/ OTH REF: 001

Card 2/2 *eyh*

L 36504-66 EWT(m)/EWP(j)/T RM/WM/JWD

ACC NR: AP6015092

SOURCE CODE: UR/0020/66/168/001/0122/0125

AUTHORS: Belevskiy, V. N.; Bugayenko, L. T.; Golubev, V. B.

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

TITLE: Kinetics of the decomposition of radicals in frozen aqueous solutions of NaClO_4 and HClO_4

SOURCE: AN SSSR. Doklady, v. 168, no. 1, 1966, 122-125

TOPIC TAGS: free radical, chemical kinetics, electron spin resonance

ABSTRACT: Kinetics of the disappearance of the hydrogen atoms (I) and hydroxyl (II) and chlorine trioxide (III) radicals in a frozen aqueous solution of NaClO_4 and HClO_4 irradiated with Co^{60} γ -rays were investigated by means of ESR. Such a study should clarify the mechanism by which the molecular products of radiolysis are formed. Solutions were frozen in glass ampules 2--2.5 mm thick and irradiated with γ -rays in doses of $\sim 3 \times 10^{16}$ ev/ml/sec at -196C. Modification of the continuous method described by V. B. Golubev (ZhFKh, 38, 2320, 1964) was employed in following the reaction kinetics. A typical decomposition curve is shown in Fig. 1. For short reaction times the process was strictly of second order for I and III, but of mixed order for II.

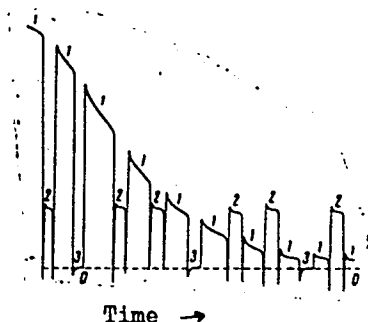
Card 1/2

UDC: 541.15+541.515+541.127

L 36504-66

ACC NR: AP6015092

Fig. 1. Typical disappearance curves for radicals at -140°C in 5 M HCIO_4 : 1 - signal from test sample; 2 - signal from standard; 3 - calibration line.



For an extended reaction time the process was of the first order for all investigated radicals. Activation energies for the disappearance of I and III were determined, and it was found that the activation energy of the disappearance of H in HCIO_4 is twice that in NaClO_4 . This paper was presented by Academician A. N. Frumkin on 12 August 1965. Orig. art. has: 4 figures, 1 table, and 3 equations.

SUB CODE: 07/ SUBM DATE: 23Jul65/ ORIG REF: 006/ OTH REF: 003

Cord 2/2/11LP

L 33051-66 EWT(1) RO
ACC NR: 6024123

(N)

SOURCE CODE: UR/0394/66/004/004/0004/0007

AUTHOR: Kosmatyy, Ye. S.; Maronova, I. B.; Bugayenko, L. T.

ORG: Ukrainian Scientific Research Institute of Plant Protection (Ukrainskiy nauchno-issledovatel'skiy institut zashchity rasteniy)

TITLE: Chromatopolarographic and polarographic determination of chlorophos in plants

SOURCE: Khimiya v sel'skom khozyaystve, v. 4, no. 4, 1966, 64-67

TOPIC TAGS: polarograph, paper chromatography, polarographic analysis, plant physiology, biochemistry/SGM-8 polarograph

ABSTRACT: To provide a method for studying the input and distribution of chlorophos in different organs of plants and also to establish its retentiveness in plants a method was developed for the qualitative and quantitative determination of chlorophos residues in fruits and vegetables using paper chromatography and polarography. The chromatographic process lasts 4-5 hours. The R_f value for chlorophos is 0.14 and for 0,0-dimethyl-2,2-dichlorovinylphosphate (DDVP -- a degradation product of chlorophos) it is 0.76. Identical values were obtained using n-hexane saturated with methane, or petroleum ether saturated with methane as eluent. The reaction involving DDVP in a basic medium with resorcinol to form a red color was used to develop the paper chromatograms of both DDVP and chlorophos. It

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UDC: 543.253/544:632.95

0915 1699

the phos

ACC NR: AP7000008

SOURCE CODE: UR/0076/66/040/011/2764/2770

AUTHOR: Van Ven-sin'; Bugayenko, L. T.; Belevskiy, V. N.

ORG: none

TITLE: Radiation chemistry of chlorine-oxygen compounds. VI. Radiolysis of solid perchlorates

SOURCE: Zhurnal fizicheskoy khimii, v. 40, no. 11, 1966, 2764-2770

TOPIC TAGS: solid perchlorate, radiolysis, gamma irradiation, perchlorate ion, radiolysis product, ~~radiation-induced chemical reaction~~ chlorine compound

ABSTRACT: A study has been made of radiation-induced chemical reactions in solid NaClO_4 and $\text{NaClO}_4 \cdot \text{H}_2\text{O}$ at $-196-20^\circ\text{C}$, and in solid $\text{Ba}(\text{ClO}_4)_2 \cdot 3\text{H}_2\text{O}$ and $\text{Mg}(\text{ClO}_4)_2$ at room temperature. Purified polycrystalline perchlorate specimens were γ -irradiated from a Co^{60} source (dose rate, $\sim 3 \cdot 10^{16}$ $\text{ev/g} \cdot \text{sec}$). The irradiated specimens were dissolved in water and analyzed for ClO_2 , for Cl^- , ClO^- , and ClO_2^- ions, and for the sum of the reduction products of the ClO_4^- ion by methods described earlier by the authors (Zh. fiz. khimii, 40, 2094, 1965). The concentration of ClO_3^- ions was determined from the balance. The results of the study, given in graphical and tabular form, indicate that: 1) the main radiolysis product of the ClO_4^- ion is the ClO_3^- ion.

Card 1/2

UDC: 541.15

ACC NR: AP7000008

In addition to the ClO_3^- ion, ClO_2 and Cl^- , ClO^- , and ClO_2^- ions are formed; and 2) the yield in Cl^- ions is proportional to the electron share of the cation, as a result of the transfer of energy from the cation to the anion. A mechanism of the radiolysis of perchlorate ions in solid salts is proposed. This mechanism involves ionization and excitation of the perchlorate ion as a first step, and redox conversions of compounds of intermediate valence chlorine as subsequent steps. The study was reviewed by Professor N. A. Bakh. Orig. art. has: 6 figures and 3 tables.

[W. A. 77]

[BO]

SUB CODE: 07/ SUBM DATE: 07Jun65/ ORIG REF: 007/ OTH REF: 010

Card 2/2

USSR/Cultivated Plants - Grains.

11-4

Abs Jour : Ref Zhur - Biol., No 2, 1958, 39243

Author : Dugayenko, M.I.

Inst : All-Union Scientific Research Institute of Corn.

Title : Corn in Albania.

Orig Pub : Byul. Vses. n.-i. in-ta kukhury, 1957, No 1, 18-20.

Abstract : No abstract.

Card 1/1

BUGAYENKO, N.Ye.

Partus of a very large child. Zdrav. Bel. 7 no.9:71 S '61.
(MIRA 14:10)

1. Iz Skribovskoy uchastkovoy bol'nitsy, Zheludokskogo rayona,
Grodnenskoj oblasti (glavnyy vrach bol'nitsy N.M.Krasutskaya).
(LABOR (OBSTETRICS))

32000006-0
VEROZUB L.; YUGAYENKO, O.; BURACHEK, V.

~~Results of the observation of the total solar eclipse of June 30, 1954, by the expedition of the astronomy club at the Kharkov Palace of Pioneers. TSir.Astron.obser.Khar.un. no.15:63-65 '56. (MLRA 10:5)~~
(Eclipses, Solar--1954)

Bugayenko

VEROSUB, L.V.; BUGACHEV, V.S.; BUGAYENKO, O.I.

Observation of the total solar eclipse on June 30, 1954. Biol. Zh. no.20:3-8 '57. (1954, 10:8)

1. Khar'kovskoye otdeleniye Vsesoyuznogo astronomo-geodezicheskogo obshchestva.

(Eclipses, Solar--1954)

S/275/63/000/001/022/035
D413/D308

AUTHORS: Dudinov, V. N. and Bugayenko, O. I.

TITLE: An automatic electropolarimeter

PERIODICAL: Referativnyy zhurnal, Elektronika i yeye primeneniye,
no. 1, 1963, 3, abstract 1V 16 (Uch. zap. Khar'kovsk.
un-t, v. 122, 1962, Tr. Astron. observ., no. 14, 100-
102)

TEXT: The authors describe an instrument for the direct determination of the magnitude and angle of polarization. It uses a $\Phi\Xi\gamma-17$ (FEU-17) radiation detector. The light modulation frequency is 540 c/s and twice the frequency of rotation of the polaroid is 90 c/s. The electrical circuit of the instrument is given. An AGC system holds the mean value of the photomultiplier output current constant independent of the magnitude of the polarization and of the light flux. A narrow-band amplifier separates out the component of the photomultiplier current at the frequency of rotation of the polaroid, and this is used to determine the magnitude of the pola-

Card 1/2

An automatic electropolarimeter

S/275/63/000/001/022/035
D413/D308

rization. To find the plane of polarization, the phase-shift is measured between the pulses being analyzed and marker pulses, which are fed to the inputs of a trigger circuit. The anode current of the trigger is proportional to the phase-shift between the pulses. The absolute accuracy is about 0.5%. The instrument is designed for investigation of the polarization of the moon and the planets. Its simplicity and ease of setting-up are noted. [Abstracter's note: Complete translation.]

Card 2/2

L 24798-65 EWG(v)/EWT(1)/EEC(t) Pe-5/Po-4/Pae-2 GW/MLK
ACCESSION NR: AT4049988 S/0000/64/000/000/0111/0125

30
29
B41

AUTHOR: Bugayenko, O.I.

TITLE: Automatic electropolarimeter of the Glavnaya astronomicheskaya observatoriya AN UkrSSR (Main Astronomical Observatory, Academy of Sciences Ukr. SSR)

SOURCE: AN UkrSSR. Glavnaya astronomicheskaya observatoriya. Fizika Luny* i planet (Physics of the moon and planets). Kiev, Naukova dumka, 1964, 111-125

TOPIC TAGS: polarimeter, electropolarimeter, astronomical instrument, Mars, moon

ABSTRACT: The author describes an automatic electropolarimeter designed and constructed at the Glavnaya astronomicheskaya observatoriya AN UkrSSR (Main Astronomical Observatory, Academy of Sciences Ukr. SSR) for polarimetric investigations of the moon and planets. The principle of operation of the automatic polarimeter can be understood by a study of the block diagram of the instrument, shown in Fig. 1 of the Enclosure. The investigated light is passed through a rotating analyzer 1 and is incident on the cathode of the photomultiplier 2. The anode current of the photomultiplier is proportional to the instantaneous intensity of the light and creates, on the load resistance R, a potential difference which is measured by a special electrometric amplifier 3. At the amplifier output there is a system of filters

Card 1/4

L 24798-65

ACCESSION NR: AT4049986

for separating from the signal the constant component I_0 , proportional to the mean value of the brightness of the object, and the harmonic component with the frequency of optical modulation of light $A \cos (\omega t + \varphi)$. The constant component of the signal is compared with the reference voltage source. The results of the comparison in the form of the difference between the two signals is fed to the input of the system for automatic volume control 4 which controls the supply voltage of the photomultiplier 5. The strength of the automatic volume control system is such that with an increase of the light flux by a factor of 10^4 the amplification factor is decreased by $0.995 \cdot 10^4 \approx 10^4$. With such a change (by 10 stellar magnitudes) in the light flux the value of the constant component of the photomultiplier output signal changes by not more than 0.5%. The variable component $A \cos (2\omega t + \varphi)$ is amplified by the amplifier 6. The polarization plane is measured by the phase meter 7. The operation of the latter is based on measurement of the phase difference of the variable component of the signal and the signal from the oscillator 8, rotating the synchronous motor 9. The output indicator of the polarization plane is graduated in degrees of arc. The article is accompanied by a circuit diagram of the instrument and a diagram of the amplifier. The region of spectral sensitivity is 300-600 nm. The instrument has been used successfully in polarimetry of Mars, the moon and stars. Orig. art. has: 5 formulas and 8 figures.

Cord 2/4

L 24798-65

ACCESSION NR: AT4049988

ASSOCIATION: Glavnaya astronomicheskaya observatoriya AN UkrSSR (Main Astronomical Observatory, AN UkrSSR)

SUBMITTED: 07May64

ENCL: 01

SUB CODE: AA

NO REF SOV: 006

OTHER: 000

Cord 3/4

MARKUSH, Ivan Vasil'yevich; BUGAYENKO, P. [Buhaienko, P.], spets. red.;
GVARDIONOV, B. [Hvardionov, B.], red.; LUCHKIV, M., tekhn. red.

[Treasure of the Borzhava Valley; we shall grow 60 centners of
corn per hectare on 2600 hectares] Skarb Borzhavs'koi dolyny;
vyrostymo po 60 tsentneriv kukurudzi z hektara na ploshchi
2600 hektariv. Uzhhorod, Zakarpats'ke oblasne kryzhkovo-
gazetne vyd-vo, 1961. 19 p. (MIRA 15:7)

1. Sekretar' Irshavskogo rayonnogo komiteta Kommunisticheskoy
partii Ukrainy (for Markush).
(Borzhava Valley—Corn (Maize))

BUGAYENKO, P.A.

BUGAYENKO, P.A.--"Characteristics of the Variation of Sensitivity to Pain and Cold in a Spinal and Brain Disease Clinic(In Clinicophysiological Interpretation)."
*(Dissertation for Degrees in Science and Engineering Defended at USSR Higher Educational Institutions.) Min of Health Protection Ukrainian SSR. Kharkov Medical Inst, Kharkov, 1955

SO: Knizhnaya Letopis', No. 25 18 Jan 55

* For Degree of Candidate in Medical Sciences

BUGAYENKO, P.A., kandidat meditsinskikh nauk (Khar'kov)

Clinical significance of studying vascular and vegetative disorders
in lumbago and ischialgia. Vrach.delo no.7:769-771 JI '57.

(MLRA 10:8)

1. Klinika nervnykh bolezney (zav. - dotsent F.F.Kharchenko)
Ukrainskogo instituta usovershenstvovaniya vrachey i Tsentral'naya
psikhonevrologicheskaya bol'nitsa Ministerstva putey soobshcheniya
(NERVOUS SYSTEM, SYMPATHETIC--DISEASES)

G
BURAYENKO, P.A., Cand Med Sci -- (diss) "Treatment
of third-degree burns in experiment." Odessa, 1958,
12 pp (Odessa State Med Inst im N.I. Pirogov)
200 copies (KL, 28-58, 109)

- 75 -

BUGAYENKO, P.A., kand.med.nauk (Khar'kov)

Ultraviolet erythrematic asymmetries of the skin as a test
in diagnosing ischioradiculitis. Vrach.delo no.7:757-758
Jl '58 (MIRA 11:9)

1. Klinika nervnykh bolezney (zav. - dots. P.F. Kharchenko)
Ukrainskogo instituta usovershenstvovaniya vrachey i Tsentral'naya
psikhonervologicheskaya bol'nitsa, Ministerstva putey soobshcheniya
(NERVES, SPINAL--DISEASES)
(ERYTHEMA)

BUGAYENKO, P.A., kand.med.nauk (Khar.'kov)

Objective registration of pain in lumbosacral radiculitis. Vrach, delo
no.9:981-983 S '59. (MIRA 13:2)

1. Klinika nervnykh bolezney (zaveduyushchiy - dotsent F.F. Kharchenko)
Ukrainskogo instituta usovershenstvovaniya vrachey i Tsentral'naya
psikhonevrologicheskaya bol'nitsa Ministerstva putey soobshcheniya.
(NERVES, SPINAL—DISEASES) (PAIN)

BUGAYENKO, P.A.

Characteristics of the plethysmographic method used in clinical neurological practice. Zhur.nevr. i psikh. 59 no.4:442-445 '59. (MIRA 12:6)

1. Kafedra nervnykh bolezney (zav. - dotsent F.F.Kharchenko)
Ukrainskogo instituta usovershenstvovaniya vrachey, Khar'kov.
(PLETHYSMOGRAPHY, in var. dis.
NS dis. (Rus))
(NERVOUS SYSTEM, dis.
plethysmography (Rus))

BUGAYENKO, P.A.; kand.med.nauk

Clinical aspects and treatment of vegetative forms of lumbosacral radiculitis. Vrach.delo no.7:42-45 '60.

(MIRA 13:7)

1. Kafedra nervnykh bolezney (zav. - dotsent F.F. Kharchenko)
Ukrainskogo instituta usovershenstvovaniya vrachey i Tsentral'-
naya psikho-nevrologicheskaya bol'nitsa Ministerstva putey
soobshcheniya.

(NERVES, SPINAL--DISEASES)

BUGAENKO, P. A.

Objective method for the investigation of sensory adaptation. Zmur.
nerv. i psikh. 60 no. 2:140-144 '60. (MIRA 14:4)

1. Kafedra nervnykh bolezney (zav. - dotsent F.F. Kharchenko)
Instituta usovershenstvovaniya vrachey, Khar'kov.
(PLETHYSMOGRAPHY) (SENSES AND SENSATION)

BUGAYENKO, P.A. (Odessa)

Experimental and clinical observations while treating burns with fibrin coatings. Trudy Kiev. nauch.-issl. inst. perel. krovi i neotlozh. vhir. 3:19-22 '61.
(MIRA 17:10)

BUGAYENKO, P.A., kand.med.nauk

Primary lymphogranulomatosis of the spinal cord. Vrach.delo
no.4:135-136 Ap'63. (MIRA 16:7)

1. Kafedry nervnykh bolezney (zav.-prof. F.F.Kharchenko) Khar'kovskogo instituta usovershenstvovaniya vrachey i Tsentral'noy psikhonevrologicheskoy bol'nitsy Ministerstva putey soobshcheniya.

(HODGKIN'S DISEASE) (SPINAL CORD--DISEASES)

BUGAYENKO, P.A., dotsent

Pathogenesis and clinical aspects of lumbosacral radiculitis.
Vrach, delo no.6:66-71 Je'63. (MIRA 16:9)

1. Kafedra nervnykh bolezney (zav. - prof. F.F.Kharchenko)
Khar'kovskogo instituta usovershenstvovaniya vrachey.
(NERVES, SPINAL—DISEASES)

BONDARENKO, D.C., red.; BUGAYENKO, P.I. [Buhaienko, P.I.], red.; VASH, O.V., red.; KLIMPOTYUK, M.V., red.; PASTUSHENKO, M.S., red.; POVKE, V.O., vidp. red.; POLISHCHUK, V.P., red.; BUSIN, V.P., red.; ~~FESKIN~~'KO, V.V., red.; LUGCHIV, M., tekhn. red.

[Soviet Transcarpathia; a handbook] Radians'ke Zakarpattia; dovidnyk. Ushhorod, Zakarpats'ke obl. vyd-vo, 1957. 239 p. (MIRA 11:7)
(Transcarpathia)

ANUCHIN, V.A., red.; BUGAYENKO, P.I., red.; YEROKHINA, R.A., red.;
KHAKIMOV, V.Z., red.; ~~GEORGIYEVA~~, G.I., tekhn.red.

[Natural zones and agricultural geography of Soviet Transcarpathia; collection of articles] Prirodnaia sreda i geografiia sel'skogo khoziaistva Sovetskogo Zakarpat'ia; sbornik statei. Moskva, 1959. 193 p. (MIRA 12:10)
(Transcarpathia--Physical geography)
(Transcarpathia--Agriculture)

BUGAYENKO, S. I., Cand of Agric Sci — (diss) "The Special Features of Various Condition of Maintaining Fine-Wooled Sheep," Kiev, 1959, 22 pp (Ukrainian Academy of Agricultural Sciences) (KL, 4-60, 121)

BUGAYENKO, S.N.; gornyy inzh.; KOZYREV, N.T., gornyy inzh.; SHISH, V.N.,
gornyy inzh.

New unified UVG-4.0 and UVB-4.0 cars. Gor. zhur. no. 12:48
D '65. (MIRA 18:12)

1. Institut Giprorudmash, Krivoy Rog.

AT6000916 EWP(b)/EWA(h)/EWA(c)/EWP(f)/EWP(v)/EWP(j)/T/EWP(t)/EWP(k)/
 ETC(m) IJP(c) JD/WW/HW/EM/GS/RM UR/0000/65/000/000/0082,0093
 AUTHORS: Prigorovskiy, N. I. (Professor, Doctor of technical sciences); Bugayenko, S. Ye.
 ORG: none
 TITLE: A method for studying concentrations of stresses in shell nozzles placed under high pressure

SOURCE: AN SSSR. Institut mashinovedeniya. Polyarizatsionno-opticheskiy metod issledovaniya napryazheniy; problemy prochnosti v mashinostroyenii (Polarizing-optical method of investigating stresses; problems of durability in machinery manufacture) Moscow, Izd-vo "Nauka", 1965, 82-93

TOPIC TAGS: ~~crack-outlet, nozzle geometry, nozzle test, stress measurement, stress analysis, photoelasticity, pressure vessel, stress analysis, nozzle area~~
 ABSTRACT: A means of modeling stresses around nozzles in a pressure vessel is proposed. The authors distinguish between membrane and flexural stresses from: a) internal pressure in the shell causing meridional and annular stresses in the bottom (shell is a surface of rotation); b) the instantaneous effect of the nozzle and rim wall of the outlet; c) nozzle pressures effect on the through the flow tubes, each of which is treated by the method of Taylor, N. G. Lind, and J. W. Schweiker. A three-dimensional

Card 1/3

L 13485-66

ACC NR: AT6000916

stresses around reinforced outlets in pressure vessels. Paper ASME, 1953, N 58-A-171) and must be investigated with the aid of separate models for the shear moment in meridional and annular shell stresses, and for the torsional moment and axial force along the orifice. The physical model is described as a variant of a shell with a hemispherical top (or bottom) of constant thickness. Axial and torsional loads at the orifice are ignored as being negligible. Materials used in the model (see Fig. 1)

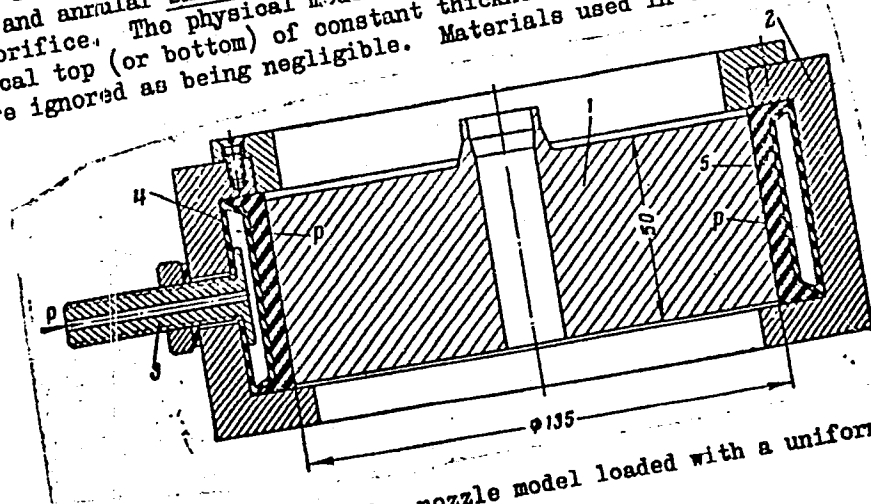


Fig. 1. Diagram of a nozzle model loaded with a uniform lateral surface pressure.

L 13485-66

ACC NR: AT6000916

are classified as ED6-M and ED5-M. The model 1 is set in a core 2 of a loading (pressure) rig, with loads applied through the pressure feed 3 into the rubber chamber 4. Rubber collar 5 bears upon the model, transmitting pressure and creating deformations. Stress measurements are detailed for selected sections of the model. Measurements were taken using a BPUTIMASH-KB2 polariscope. Interferential bands were photographed, and stresses were computed as functions of material dimensions, optical constants, and the order of the observed interference band. Stress contours are plotted for the several stresses mentioned and related to the model geometry and mode of applied loading. Orig. art. has: 8 figures and 3 equations.

SUB CODE: 13, 20/ SUBM DATE: 03Apr65/ ORIG REF: 004/ OTH REF: 003

LC0900-66 EWT(d)/EWT(m)/EWP(w)/EWA(d)/EWP(v)/EWP(j)/EWP(k)/EWA(h) WW/EM/OS/RM

ACCESSION NR: AT5017736

UR/0000/65/000/000/0065/0070

AUTHORS: Bugayenko, S. Ye.; Prigorovskiy, N. I.; Filimonova, Ye. N.; Khurshudov, G. Kh.

TITLE: Stresses in the connecting region between a supporting cone and an internally pressurized vessel

35
Bf1

SOURCE: AN SSSR. Institut mashinovedeniya. Metody issledovaniya napryazheniy; problemy prochnosti v mashinostroyenii (Methods of investigating stresses; problems of strength in machinery manufacture). Kiev, Izd-vo Nauka, 1965, 65-70

TOPIC TAGS: stress concentration, pressure vessel, shell stress, strain measurement, interference pattern

26

26

26

ABSTRACT: To study the stress concentrations in the connecting region between a supporting cone and an internally loaded vessel, a model (see Fig. 1 on the Enclosure) was built of organic glass (to the right of section AA in Fig. 1; $E = 2.9 \times 10^4$; $\mu = 0.36$) and optically insensitive material (ONS; $E = 3.1 \times 10^4$; $\mu = 0.37$) with a sheet of optically sensitive material ED6-M ($E = 3.2 \times 10^4$, $\mu = 0.37$) bonded into the critical section. The model was also instrumented with strain gages (as shown in Fig. 1) and could be loaded either by internal pressure p or by

Card 1/4

100900-66

ACCESSION NR: AT5017738

a radial load q . By shining polarized light through the ED6-M, the order of the interference patterns m would give the difference between the principal stresses as $\sigma_1 - \sigma_2 = \frac{\sigma_o^{(1.0)}}{t_{mod}} m$, (where $\sigma_o^{(1.0)}$ = optical constant; t_{mod} = thickness of ED6-M).

For an internally pressurized vessel σ_2 on the outside of the vessel would be 0 and on the inside $-p$. The strain gages could be used for measuring the external strains (or stresses) which are required to calibrate the interference patterns. Several equations are derived for the meridian and hoop stresses as a function of strain gage and material parameters, and a sample distribution of these stresses is given (see Fig. 2 on the Enclosure) without specifying the magnitudes of the loads. Orig. art. has: 3 figures and 7 formulas.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 02

SUB CODE: IE

NO REF SOV: 003

OTHER: 000

Card 2/4 *DP*

100900-66

ACCESSION NR: AT5017738

ENCLOSURE: 01

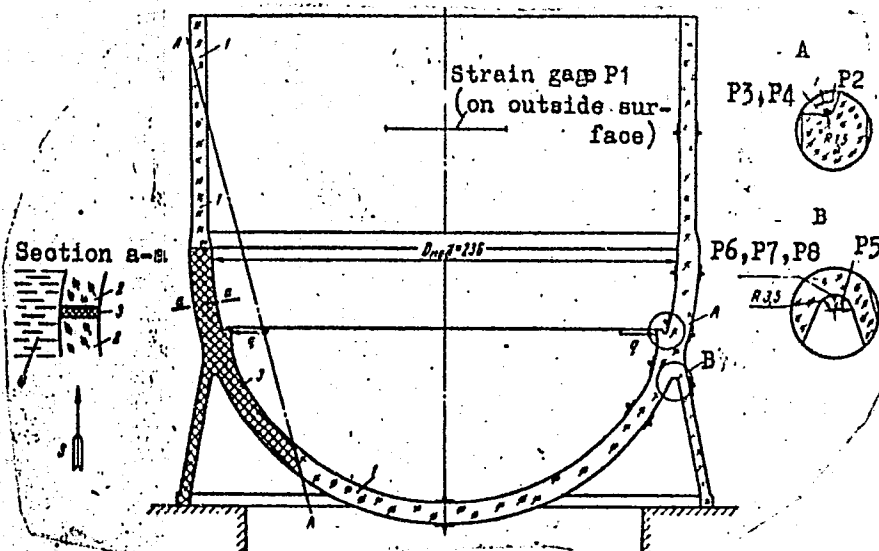


Fig. 1. Model configuration: AA-bonded section; S-light direction; 1- glass; 2- ONS; 3- ED6-M; 4- immersion; P1, P2, etc. - strain gages

Card 3/4

LC0900-66

ACCESSION NR: AT5017738

ENCLOSURE: 02

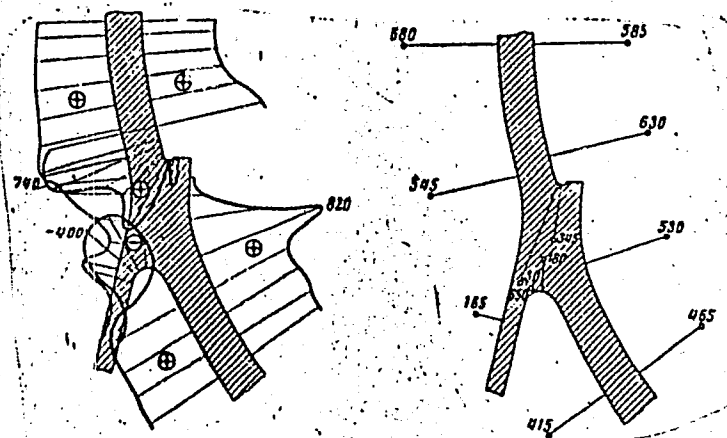


Fig. 2. Total meridian (left) and hoop (right) stresses due to internal pressure and radial loading

Card 4/4

L 36293-66 EWT(d)/EWP(m)/EWP(k)/EWP(w) IJP(c) EM

ACC NR: AR6004035

SOURCE CODE: UR/0277/65/000/009/0096/0096

AUTHORS: Bugayenko, S. Ye.; Prigorovskiy, N. I.; Fillimonova, Ye. N.; Khurshudov, G. Kh.

TITLE: Stress in the connecting zone between the supporting cone and a vessel subjected to internal pressure 49
B

SOURCE: Ref. zh. Mashinostroitel'nyye materialy, konstruktsii i raschet detaley mashin. Gidroprivod, Abs. 9.48.685

REF: SOURCE: Sb. Metody issled. napryazheniy, M., Nauka, 1965, 65-70

TOPIC TAGS: *INTERNAL STRESS, CONTACT STRESS, CONIC BODY,*
stress analysis, optic material / ONS optic material, ED 6-M optic material

ABSTRACT: The method and results of an investigation of the stressed condition in the connecting zone between the supporting cone and the vessel subjected to internal pressure are presented. The measurements were obtained from a model made of an optically insensitive material ONS with an insert of a plate made of an optically sensitive material ED 6-M cemented in the axial plane of the model. Formulas for determining meridional and annular normal stresses are given. 3 illustrations. Bibliography of 3 titles. *[Translation of abstract]* 26
26

SUB CODE: 13,20

Card 1/1 *df*

UDC: 621.8:539.001.5

ACC NR: AP7001962

SOURCE CODE: UR/0120/66/000/006/0195/0196

AUTHOR: Bakalinskiy, V. P.; Bugayenko, V. V.; Tsymbal, V. P.

ORG: none

TITLE: Static digital register with visual indication

SOURCE: Pribery i tekhnika eksperimenta, no. 6, 1966, 195-196

TOPIC TAGS: computer component, computer storage device

ABSTRACT:

A simple and reliable decade register consisting of ten TXh8G glow-discharge thyratrons (L_1-L_{10}) connected into cathode circuits of an IN-2 digital indicator tube (see Fig. 1) is described. The recording of information is performed when the pulse write signal which is applied to the first control grid of all thyratrons coincides with the write enable signal which is applied to the second control grid of a selected thyatron. When the write enable signal is applied, the coincidence write signal fires thyatron L_{10} . A potential on both the plate of L_{10} and the "zero" cathode of L_{11} drops, causing the gap between the plate and the "zero" cathode of L_{11} to fire. The digit 0 is indicated as a result. The next signal causes the corresponding thyatron and the required digit to fire. At this time the negative voltage drop from the plate of conducting thyatron is

Card 1/3

UDC: 621.374.325.4

ACC NR: AP7001962

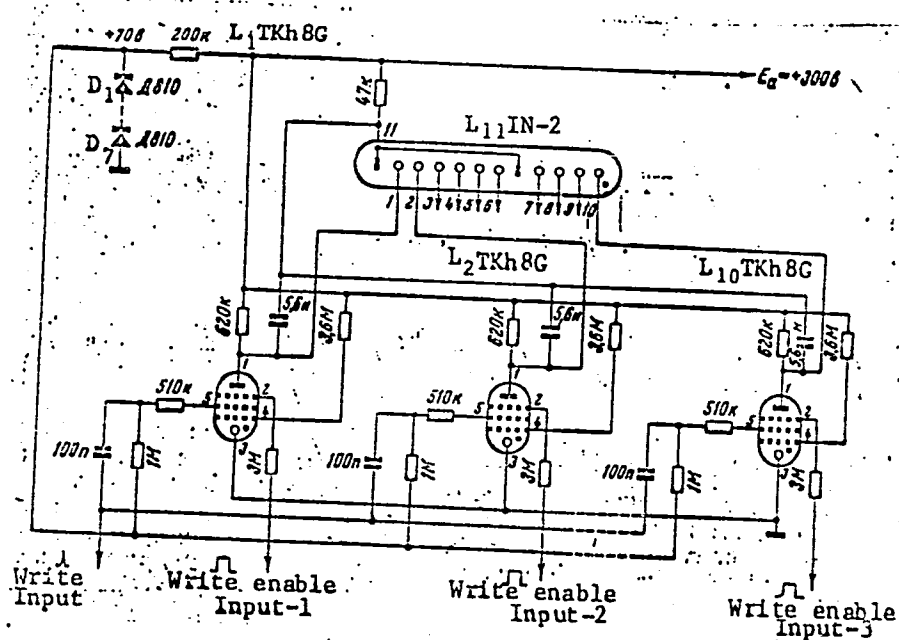


Fig. 1. Circuit of digital register

Card . 2/3

ACC NR: AP7001962

simultaneously applied to the plates and all cathodes of the digital indicator tube and to the plate of conducting thyatron L_{10} . The potential on the plate of L_{10} falls below the arc-maintaining voltage of the tube, and the thyatron stops conducting. Simultaneously the discharge stops between the plate and the "zero" cathode of L_{11} . When the next pulses are applied, the process is repeated. Thus the information concerning the last input signal is always stored in the register. Operation of the circuit is stable during variations in power supply voltage from 280 to 350 v. The amplitude of the rectangular write pulses (20—40 μ sec duration,) which are applied to the first control grids of the thyatrons, is not less than 70 volts. The amplitude of pulses which are applied to the inputs of "write enable" can be varied from 110 to 150 volts. Orig. art. has: 1 figure.

SUB CODE: 09/ SUBM DATE: 21Dec65/ ORIG REF: 003/ ATD PRESS: 5111

Card 3/3

8(2)

SOV/112-58-3-4511

Translation from: Referativnyy zhurnal. Elektrotehnika, 1958, Nr 3, p 159 (USSR)

AUTHOR: Bugayenko, Ye. V.

TITLE: Central Control for Surface Ventilation Outfits at Coal Mines
(Tsentralizovannoye upravleniye poverkhnostnymi ventilaytsionnymi ustanovkami na ugol'nykh shakhtakh)

PERIODICAL: Kolyma, 1957, Nr 2, pp 31-32

ABSTRACT: M. A. Gurov's scheme for central control of fans installed on the surface of Arkagalinsk Coal Combine Mines is described. The scheme provides for protection of an electric motor from no-load and single-phase conditions and sends an alarm signal to a control desk; the scheme also supervises the motor temperature by a thermorelay and the bearing temperature by a remote primary element. Operation of all ventilation outfits are supervised from the control desk. Illustration: 1.

A.A.R.

Card 1/1

ZHBANKOV, R.G. [Zhbankov, R.H.]; GARBUS, N.I. [Harbuz, N.I.]; SYSHKO, A.M.
[Shyshko, A.M.]; SERIGAN, A.I. [Skryhan, A.I.]; BUGAYLOK, A.A.
[Bugaionak, A.A.]

Infrared spectra of celluloses of different origin and age. Vestsi
AN BSSR. Ser. fiz.-tekh. nav. no.4:43-47 '64.

(MIRA 18:3)

BUGAYETS, A.N.; NARSEYEV, V.A.

Prospecting significance of the halos of dispersion of rare metals in
granite massifs of the Chingiz-Tau. Trudy SNIIGGIMS no.25:178-186 '62.
(Chingiz-Tau--Metals, Rare and minor) (Chingiz-Tau--Granite--Analysis) (MIRA 16:4)

NARSEYEV, V.A.; BUGAYETS, A.N.

Phosphorus content in granitoids of the Kalba Range. Vest.An Kazakh.
SSR 19 no.2: 30-35 F '63.

(Kalba Range--Rocks)

(MIRA 16:5)

DUGAYETS, P. T.

Bugay, P. T. The approximation of continuous periodic functions of two variables satisfying a Lipschitz condition by interpolating trigonometric polynomials. Doklady Akad. Nauk SSSR (N.S.) 79, 381-384 (1951). (Russian)

Let H be the class of functions $f(x, y)$ of period 2π with respect to each variable and satisfying the condition $|f(x+h, y+k) - f(x, y)| \leq M|h|^a + N|k|^b$. Let $S_{mn}(f, x, y)$ be the interpolating trigonometric polynomial of order (m, n) coinciding with f at the points $(2i\pi/(2m+1), 2j\pi/(2n+1))$; where $i=0, 1, \dots, 2m$; $j=0, 1, \dots, 2n$. Then

$$\sup_{x,y} |S_{mn}(f, x, y) - f(x, y)| = 2\pi^{-2} \log m \log n |\sin(m+\frac{1}{2})x \cdot \sin(n+\frac{1}{2})y| \times \min \{ M\pi^a/m^a, N\pi^b/n^b \} + \rho_{mn},$$

where $\rho_{mn} = O((\log m + \log n)(m^{-a} + n^{-b}))$.

A. Zygmund (Chicago, Ill.).

Source: Mathematical Reviews,

Vol 13 NQ.

BUGAYETS, P. T.

Bugayec, P. T. An asymptotic estimate of the remainder in the approximation of functions of two variables by Fourier sums. Doklady Akad. Nauk SSSR (N.S.) 79, 557-560 (1951). (Russian)

Let H_{n_1, n_2} be the class of functions $f(x, y)$ of period 2π in both x and y and satisfying the condition

$$|f(x_1, y_2) - f(x_1, y_1)| \leq \omega_1(|x_2 - x_1|) + \omega_2(|y_2 - y_1|).$$

Extending the corresponding result obtained by S. M. Nikolsky [C. R. (Doklady) Acad. Sci. URSS (N.S.) 52, 191-194 (1946); these Rev. 8, 149] for functions of a single variable, the author obtains for

$$E_{n_1, n_2} = \sup_{f \in H_{n_1, n_2}} |S_{n_1, n_2}(f; x, y) - f(x, y)|$$

(S_{n_1, n_2} is the partial sum of the Fourier series of f) the following asymptotic formula:

$$E_{n_1, n_2} = 2\pi^{-1} \theta_{n_1, n_2} (2m+1)(2n+1) \log m \log n$$

$$\times \int_0^{h^{(n)}} \int_0^{h^{(m)}} \min \{ \omega_1(2u), \omega_2(2v) \}$$

$$\times \sin \left(m + \frac{1}{2} \right) u \sin \left(n + \frac{1}{2} \right) v du dv + \rho_{n_1, n_2}$$

where $\rho_{n_1, n_2} = 2\pi/(2m+1)$.

$$\theta_{n_1, n_2} = O \{ (\log m + \log n) (\omega_1(h^{(n)}) + \omega_2(h^{(m)})) \}$$

and $\frac{1}{2} \leq \theta_{n_1, n_2} \leq 1$. If ω_1 and ω_2 are convex, then $\theta_{n_1, n_2} = 1$. A. Zygmund (Chicago, Ill.).

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Source: Mathematical Reviews.

Vol 13

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BUGAYETS, P.T., starshiy prepodavatel'

Using Fourier's summation method for the asymptotic estimation
of the remainder in approximating a class of differentiable functions
of variables. Trudy DIIT no.26:336-348 '58. (MIRA 11:7)
(Functions of several variables)

BUGAYETS T. A.

USSR/RR Transport
Bibliog

4602.0105

May 1947

"Book Shelf" 1 p

"Zh-d Transport" No 5

Summary of following books published by Transzhelezizdat in 1946 and 1947 including number of pages and price of each publication: "Organization of Freight Work in Railroad Transport. Stocks and Mechanization of Loading and Unloading Operations," G. P. Grinevich, "Analysis of the Balance of Railroads," A. N. Grigor'yev; "Mechanization of Loading and Unloading Operations at Freight Stations"; "Leading Methods of Work at Railroad Fuel Warehouses," T. A. Bugayets and G. V. Dubinin; and "Superfluous Material at Railroad Stations," S. N. Popov.

18G74

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1214. UTILIZATION OF FUEL WASTE AND LOCAL FUEL ON RAILWAYS.
(ISPOL'ZOVANIE TOPLIVNYKH OTKHOĐOV I IESTNOĐO TOPLIV. NA ŽELEZNYKH
ĐODOĐAKH). Buznets, T.A. (Moscow: Transzhelcorizdat, '95), 215pp.;
title in recent Accessions. Brit. Museum).

BUGAYEZ, T A

BUGAYEZ, T A
FORTSCHRITTLICHE ARBEITSMETHODEN IN DEN BRENNSTOFFLAGERN DER EISENBAHN. VON T. A.
BUGAYEZ UND G. V. DUBININ. HRSG. VON DER LEHRMITTELSTELLE DER DEUTSCHEN REICHSBAHN.
LEIPZIG, FACHBUCHVERLAG, 1954. 120 P. ILLUS., DIAGRS., TABLES. TRANSLATION FROM THE
RUSSIAN, "PEREDOVYYE METODY RABOTY NA TOPLIVNYKH SKLADAKH ZHELEZNYKH DOROG", MOSCOW 1949.

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~~BUGAYETS~~, Trofim Alekseyevich; VIL'CHINSKIY, Vatslav Lavrent'yevich; DACHUK,
L.Ya., inzhener redaktor; VERINA, G.P., tekhnicheskij redaktor

[Manual on railroad fuel and fuel storage] Spravochnik po toplivu
i toplivno-skladskomu khoziaistvu zheleznykh dorog. Moskva, Gos.
transp. zhel-dor. izd-vo, 1956. 483 p. (MLRA 9:12)
(Fuel) (Railroads--Management)

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Liquid volume counters. Elek.i tep. tiaga no.7:36 J1 '57. (MLA 10:4)
(Flowmeters)

BUGAYETS, T.A., inzh.

Pumps used in equipping diesel locomotives. Elek. i topl.
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(Fuel pumps) (Diesel locomotives)

BUGAYETS, T.A.

RP-40 nozzle for delivery of petroleum products to diesel
locomotives. Elek.i tepl.tiaga 3 no.8:36 Ag '59.
(MIRA 12:12)

(Diesel locomotives)

BUGAYETS, ~~Trofim~~ Alekseyevich; VIL'CHINSKIY, Vatslav Lavrent'yevich;
MENZHINSKIY, I.G., inzh., red.

[Handbook on fuel and fuel storage facilities on railroads]
Spravochnik po toplivu i toplivno-skladskomu khoziaistvu
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1964. 518 p. (MIRA 17:5)

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ACCESSION NR: AP5016791

UR/0286/65/000/010/0138/0139
665.4 : 658.527

AUTHOR: Bugayets, T. A.; Lobanov, V. V.

TITLE: A method for continuous production of lubricating grease. Class 23,
No. 82511

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 10, 1965, 138-139

TOPIC TAGS: lubrication, lubricating grease, continuous flow method, continuous process

ABSTRACT: This Author's Certificate introduces a method for continuous production of lubricating grease. All production operations are mechanized and done in closed equipment. Closed conveyors are used for moving the raw material, intermediate products and finished goods.

ASSOCIATION: none

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BUGAYETS, YE. A.

"New Method of Aligning Film In a Plane in Aerial Cameras." Sub 29
Jun 51, Moscow Inst of Engineers of Geodesy, Aerial Photography and
Cartography

Dissertations presented for science and engineering degrees in
Moscow during 1951.

SC: Sum. No. 480, 9 May 55

BUGAYETS, Yevgeniy Andreyevich; SLAVOROSOV, A.Kh., otv.red.; LOMILINA,
L.N., tekhn.red.

[Photogrammetry in mining] Fotogrammetriia v gornom dele. Moskva.
Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1960. 243 p.
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(Mine surveying)

(Photographic surveying)

RODIONOV, Leonid Yevgen'yevich, dots.; BUGAYETS, Yevgeniy Andreyevich, dots.;
ALEKSEYEV, S.L., starshiy prepodavatel'; SLAVOROSOV, A.Kh., red.
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razrabotkakh. Moskva, Gos. ~~nauchno~~-tekhn. izd-vo po gornomu delu,
1961. 334 p. (MIRA 14:8)

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Bugayets, Alekseyev)
(Mine surveying)

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ZVONAREV, Klimentiy Aleksandrovich; BELOLIKOV, Antonin Niko-
layevich; GUSEV, Nikolay Andreyevich; BUGAYETS, Ye.A., otv.
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[Advanced geodesy] Vysshaya geodeziya. By V.G.Zdanovich i dr.
Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1961.
607 p. (MIRA 15:1)

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BUGAYETS, Yevgeniy Andreyevich; PEREGUDOV, M.A., kand. tekhn. nauk,
dots., otv. red.; GONCHAROVA, I.V., red. izd-va;
SAGITULLINA, R.I., tekhn. red.

[Theory of combined outline method for making a topographic
map; lecture 1 for students of the Mining Department
specializing in mine surveying] Teoriia konturno-kombinirovan-
nogo metoda sozdaniia topograficheskoi karty; lektsiia 1 dlia
studentov gornogo fakul'teta spetsial'nosti "Marksheiderskoe
delo." Moskva, Vses. zaokhnyi politekhn. in-t, 1960. 46 p.
(MIRA 15:9)

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BUGAYETS, Yevgeniy Andreyevich; PEREGUDOV, M.A., dotsent kand. tekhn.
nauk, otv. red.; GONCHAROVA, I.V., red. izd-va; SAGITULLINA,
R.I., tekhn. red.

[Theory of aerial and terrestrial stereophotogrammetric methods
for making topographic maps; second lecture for students of the
Mining Department specializing in mine surveying] Teoriia stereo-
fotogrammetricheskogo vozdušnogo i nazemnogo metodov sozdaniia
topograficheskikh kart; lektsiia 2-ia dlia studentov gornogo fa-
kul'teta spetsial'nosti "Marksheiderskoe delo." Moskva, Vses.
zaochnyi politekhn.in-t, 1960. 65 p. (MIRA 15:9)
(Photographic surveying)

PHASE I BOOK EXPLOITATION

SOV/6555

Bugayets, Yevgeniy Andreyevich

Fotogrammetriya (Photogrammetry) Moscow, Gosgortekhzdat, 1963.
287 p. Errata slip inserted. 2200 copies printed.

Ed. of Publishing House: A. Kh. Slavorosov; Tech. Ed.: S. Ya.
Shklyar and Z. A. Boldyreva.

PURPOSE: This book is primarily intended as a textbook for students
of mining institutes; it can also be used by mining engineers.

COVERAGE: The principles of photogrammetry and its application to
mining engineering are discussed. The book describes methods of
aerial and terrestrial photogrammetric surveying, laboratory proces-
sing of photographs, and field and laboratory instruments used in
photogrammetry. There are 17 references, all Soviet.

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AKININ, P. I., inzh.; BUGAYEV, A. B., inzh.; GAZIN, V. V., inzh.;
GINDIS, Ya. P., inzh.; ZAYTSEV, V. V., inzh.; KARPENKO, V. M.,
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Automatic control of ladle turning. Mekh.i avtom.proizv.18
no. 5:14-16 My '64. (MIRA 17:5)

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D '58.

1. Novo-Kramatorskiy mashinostroitel'nyy zavod (for all). 2. Mekhanicheskii tsekh No.5 (for Bugayev). 3. Mekhanicheskii tsekh No. 7, predsedatel' tsekhovogo soveta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov (for Izvekov). 4. Upolnomochennyy Byuro ratsionalizatorov i izobretateley v 1-m mekhanicheskom tsekhe (for Tret'yakov). 5. Mekhanicheskii tsekh No.7 (for Orzhekhovskiy). 6. Rukovoditel' sektsii sodeystviya izobretatel'stvu i ratsionalizatsii Soveta veteranov truda (for Litus). 7. Fasonnoliteynyy tsekh No.1 (for Babanov, Syroyedov). 8. Nachal'nik otdela tekhnicheskoy informatsii i izobretatel'stva (for Terenik). 9. Predsedatel' zavodskogo soveta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov (for Ladygin).
(Kramatorsk--Machinery industry)